NOVEL METHOD AND SYSTEM FOR INTERACTION BETWEEN A PROCESSOR AND A POWER ON RESET CIRCUIT TO DYNAMICALLY CONTROL POWER STATES IN A MICROCONTROLLER

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ABSTRACT

A method and system dynamically controlling microcontroller power. In one embodiment, the method and system configures a microcontroller power state,

10 senses its condition, and determines its suitability status, communicates that status between a POR circuit and a processor, controls certain microcontroller functions accordingly, and dynamically programs power related functions. This is enabled, in one embodiment, by dynamic interaction between the POR circuit and the processor. Microcontroller power status is ascertained, and a corresponding optimal

15 power state determined. Optimal values for programmable independent multiples of a supply voltage is programmatically calculated and set, dynamically adjusting microcontroller power states. In one embodiment, the optimal values are communicated to a scaler in the POR circuit by the processor, and registered within a multiplexer/register matrix within the scaler. The processor commands the matrix to

20 change programmable independent multiples of supply voltage to correspond with the optimal values, and monitors corresponding action and power status.